CLAIMS

What is claimed is:

1. A power supply system comprising:

a power line input;

a power conversion circuit connected to said power line input that has at least one power output and provides power to a host system;

a power line networking signal coupling circuit connected to said power line input;

an output power coupling circuit connected to one of said at least one power output; and

a power line networking interface connected to said power line networking signal coupling circuit adapted to receive power line networking signals from said power line input and adapted to send power line networking signals to said power line input, said power line networking interface connected to said output power coupling circuit to receive data signals from said host system and to send data signals to said host system.

2. A power supply system as claimed in claim 1, wherein said power line input is a connector suitable to receive a power cable.

3. A power supply system as claimed in claim 1, wherein said power line networking signal coupling circuit comprises a coupling capacitor and an isolation transformer.

4. A power supply system as claimed in claim 1, wherein said output power coupling circuit comprises a second coupling capacitor and a second isolation transformer.

5. A power supply system as claimed in claim 1, wherein said at least one output comprises at least one of 3.3V DC, 5V DC, 9V DC, 16V DC, 19V DC, 12V DC, -12V DC, 24V AC and 48V DC.

6. A computer system comprising:

a chassis;

at least a processor and a memory configured substantially upon a main circuit card;

a power supply;

a power line input that connects to said power supply;

a power conversion circuit connected to said power line input, said power conversion circuit provides at least one power output to power said computer system;

a power line networking signal coupling circuit connected to said power line input;

an output power coupling circuit connected to one said at least one power output;

a power line networking interface connected to said power line networking signal coupling circuit adapted to receive power line networking signals from said power line input and adapted to send power line networking signals to said power line input, said power line networking interface connected to a first modulator/demodulator circuit, said first modulator/demodulator circuit connected to said output power coupling circuit to receive and to send data signals to and from said main circuit card; and

a second modulator/demodulator circuit located outside of said power supply and connected to said one said at least one power output, said second modulator/demodulator circuit adapted to receive data signals from said first modulator/demodulator circuit over said one said at least one power output and said second modulator/demodulator circuit adapted to send data signals to said first modulator/demodulator circuit over said one said at least one power output.

7. A computer system as claimed in claim 6, wherein said power line input is a connector suitable to receive a power cable.

8. A computer system as claimed in claim 6, wherein said power line networking signal coupling circuit comprises a coupling capacitor and an isolation transformer.

9. A computer system as claimed in claim 6, wherein said output power coupling circuit comprises a second coupling capacitor and a second isolation transformer.

10. A computer system as claimed in claim 6, wherein said second modulator/demodulator is substantially mounted upon said main circuit card.

11. A computer system as claimed in claim 6, wherein said at least one power output comprises at least one of 3.3V DC, 5V DC, 9V DC, 16V DC, 19V DC, 12V DC, -12V DC, 24V AC and 48V DC.

12. A computer system as claimed in claim 6, wherein said first modulator/demodulator circuit uses at least one type of modulation chosen from a group consisting of frequency modulation, pulse-width modulation, Orthogonal Frequency Division Multiplexing (OFDM), quadrature modulation and Quadrature Amplitude Modulation (QAM).

13. A computer system as claimed in claim 6, wherein said second modulator/demodulator circuit uses at least one type of modulation chosen from a group consisting of frequency modulation, pulse-width modulation, Orthogonal Frequency Division Multiplexing (OFDM), quadrature modulation and Quadrature Amplitude Modulation (QAM).

14. An external power supply system comprising:

a power line input;

a power conversion circuit connected to said power line input having at least one power output that provides power to a host system through a power cable;

a power line networking signal coupling circuit connected to said power line input;

an output power coupling circuit connected to one of said at least one power output; and

a power line networking interface connected to said power line networking signal coupling circuit adapted to receive and send power line networking signals to and from said power line input, said power line networking interface connected to said output power coupling circuit to send and receive data signals to and from said host system.

15. An external power supply system as claimed in claim 14, wherein said power line input is a connector suitable to recieve a power cord.

16. An external power supply system as claimed in claim 14, wherein said power line networking signal power line coupling circuit comprises a coupling capacitor and an isolation transformer.

17. An external power supply system as claimed in claim 14, wherein said output power coupling circuit comprises a second coupling capacitor and a second isolation transformer.

18. An external power supply as claimed in claim 14, wherein said at least one power output comprises at least one of 3.3V DC, 5V DC, 9V DC, 16V DC, 19V DC, 12V DC, -12V DC, 24V AC and 48V DC.

19. An external power supply as claimed in claim 14, wherein said power cable has a connector adapted to mate with a second connector located on said host system.

20. An external power supply system as claimed in claim 14, wherein said power line networking interface uses at least one type of modulation chosen from a group consisting of frequency modulation, pulse-width modulation, Orthogonal Frequency Division Multiplexing (OFDM), quadrature modulation and Quadrature Amplitude Modulation (QAM).

21. A computer system comprising:

a chassis;

at least a processor and a memory configured substantially upon a main circuit card housed substantially within said chassis;

an external power supply;

a power line input that connects to said external power supply;

a power conversion circuit connected to said external power line input and housed within said external power supply providing at least one power output to said main circuit card;

a power line networking signal coupling circuit connected to said power line input housed within said external power supply;

an output power coupling circuit connected to one of said at least one power output housed within said external power supply;

a power line networking interface connected to said power line networking signal coupling circuit adapted to receive and send power line networking signals to and from said power line input, said power line networking interface connected to a first modulator/demodulator circuit, said first modulator/demodulator circuit connected to said output power coupling circuit to send and receive data signals to and from a second modulator/demodulator, said power line networking interface substantially housed within said external power supply;

an input power coupling circuit connected to said one of said at least one power output located outside of said external power supply; and

a second modulator/demodulator circuit located outside of said external power supply and connected to said input power coupling circuit to send and receive data signals to and from said first modulator/demodulator circuit over said one of said at least one power output.

22. A computer system as claimed in claim 21, wherein said power line input is a connector suitable to receive a power cable.

23. A computer system as claimed in claim 21, wherein said power line networking signal coupling circuit comprises a coupling capacitor and an isolation transformer.

24. A computer system as claimed in claim 21, wherein said output power coupling circuit comprises a second coupling capacitor and a second isolation transformer.

25. A computer system as claimed in claim 21, wherein said input power coupling circuit comprises a third coupling capacitor and a third isolation transformer.

26. A computer system as claimed in claim 21, wherein said at least one power output comprises at least one of 3.3V DC, 5V DC, 9V DC, 16V DC, 19V DC, 12V DC, -12V DC, 24V AC and 48V DC.

27. A computer system as claimed in claim 21, wherein said second modulator/demodulator circuit is substantially mounted within said chassis.

28. A computer system as claimed in claim 21, wherein said second modulator/demodulator circuit is substantially mounted upon said main circuit card within said chassis.

29. A computer system as claimed in claim 21, wherein said second modulator/demodulator circuit is substantially mounted upon a daughter card which is substantially mounted upon said main circuit card, said main circuit card substantially mounted within said chassis.

30. A computer system as claimed in claim 21, wherein said first modulator/demodulator uses at least one type of modulation chosen from a group consisting of frequency modulation, pulse-width modulation, Orthogonal Frequency Division Multiplexing (OFDM), quadrature modulation and Quadrature Amplitude Modulation (QAM).

31. A computer system as claimed in claim 21, wherein said second modulator/demodulator uses at least one type of modulation chosen from a group consisting of frequency modulation, pulse-width modulation, Orthogonal Frequency Division Multiplexing (OFDM), quadrature modulation and Quadrature Amplitude Modulation (QAM).

32. A means for providing an external power supply system with power line networking comprising:

a means for housing said external power supply system;

a means for providing power line input that passes through said means for housing;

a means for converting said power line input into at least one output voltage housed within said means for housing;

a first means for coupling to said power line input, said first means for coupling connected to said means for providing power line input, said first means for coupling to said power line input housed within said means for housing;

a second means for coupling to one of said at least one output voltage, said second means for coupling to one of said at least one output voltage housed within said means for housing; and

a first means for modulating/demodulating a networking signal coupled to said first means for coupling to said power line input, said first means for modulating/demodulating a networking signals housed within said means for housing; and

a second means for modulating/demodulating said networking signal through said second means for coupling to one of said at least one output voltage, said second means for modulating/demodulating said networking signal housed within said means for housing.

33. A means for providing an external power supply system with power line networking as claimed in claim 32, wherein said means for providing power line input is a connector suitable for receiving a power cord.

34. A means for providing an external power supply system with power line networking as claimed in claim 32, wherein said first means for coupling to power line networking signals comprises a coupling capacitor and an isolation transformer.

35. A means for providing an external power supply system with power line networking as claimed in claim 32, further comprising a means for providing a third means for modulating/demodulating said networking signals through a third means for coupling to one of said at least one output voltage, said third means for modulating/demodulating said networking signals housed outside of said means for housing.

36. A means for providing an external power supply system with power line networking as claimed in claim 35, wherein said third means for modulating/demodulating said networking signals through a third means for coupling to at least one of said at least one output voltage is substantially integrated upon a circuit card within a system that is powered by said means for providing an external power supply system with power line networking.

37. A computer system as claimed in claim 32, wherein said first means for modulating/demodulating a networking signal conforms to the Home Power Line Network Association standard

38. A computer system as claimed in claim 32, wherein said second means for modulating/demodulating said networking signals uses at least one of the following types of modulation for sending and receiving data signals to and from said second modulator/demodulator chosen from a group consisting of frequency modulation, pulse-width modulation, Orthogonal Frequency Division Multiplexing (OFDM), quadrature modulation and Quadrature Amplitude Modulation (QAM).

39. A computer system as claimed in claim 35, wherein said means for providing a third means for modulating/demodulating said networking signals uses at least one of the following types of modulation for sending and receiving data signals to and from said first modulator/demodulator chosen from a group consisting of frequency modulation, pulse-width modulation, Orthogonal Frequency Division Multiplexing (OFDM), quadrature modulation and Quadrature Amplitude Modulation (QAM).